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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,112	07/18/2003	Jin Hyun Kim	SI-0038	1630

7590 11/30/2006

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EXAMINER	
PORTIS, SHANTELL L	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,112	KIM, JIN HYUN	
	Examiner	Art Unit	
	Shantell Portis	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7-10, 13-17, 20, 21, 23-25, 27, 29-31 and 34-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al (Lewis), U.S. Patent No. 7,010,303.

Regarding Claims 1-3, 7, 13 and 23-25, Lewis discloses a repeater remote control system in a mobile communication system comprising: a server that controls at least one repeater through packet data transmissions sent through a mobile IP network; and a data terminal unit that establishes a first link between said repeater and the server through the mobile IP network, wherein the data terminal unit establishes a second link between said repeater and the server by interworking with a mobile communication network and wherein after the second link is established, the data terminal unit passes control packet data from the server to said repeater through the mobile IP network. **The host system 28 and mobile device 24 communicate messages via a wireless router 20 (Col. 5, lines 49-57). First and second links (wireless networks 26) are established between the system 28 and device 24 via router 20 for transmitting data packets. The wireless networks 26**

could be IP or GPRS networks (Col. 13, lines 6-12; Col. 15, lines 54-61 and Figure 1).

Regarding Claims 4, 14 and 36, Lewis discloses wherein said packet data transmissions include an SMS message, wherein establishing the link includes transmitting at least one SMS message within the mobile communication network and wherein the establishing step includes: transmitting a connection request message as an SMS message to the repeater over the link; and connecting the link based on a response from the SMS message. **The mobile device 24 include a keyboard 232 and display 222 that is used for communicating by entering text messages for transmitting data packets over the mobile communication network (Col. 11, lines 30-35 and Col. 12, lines 11-16). The router 20 has a store and forward structure that permits SMS messaging over the networks (Col. 16, lines 31-34).**

Regarding Claims 5, 15 and 34, Lewis discloses wherein the server sends said packet data transmissions to said repeater by matching with an IWF (InterWorking Function) within the mobile communication network, wherein establishing the link includes transmitting a wireless modem ring signal upon matching with an IWF (InterWorking Function) within the mobile communication network and a method for controlling a repeater in a mobile communication system, comprising: establishing a link between a server and the repeater based on an internetworking function performed with a mobile communication network; and transmitting control information between the server to the repeater over the link. **Links are established between the system 28 and device 24 for transmitting data packet messages. Information is transmitted**

via a router 20 through different networks 26 which inherently include an IWF within the mobile communication network for allowing communications between the different networks (see rejection for claim 1).

Regarding Claims 8, 9, 16, 17 and 37, wherein said establishing the first link comprises: checking whether the data terminal unit is in a normal state, said checking performed by the repeater; if the data terminal unit is in the normal state, transmitting server connection information from the repeater to the data terminal unit; conducting a procedure for approval of connection with the server through the mobile communication network based on the server connection information; and receiving a message indicating the server connection approval and transmitting the received message to the repeater, wherein server connection information comprises at least one of a phone number, an IP address, and server port information of the server to be connected **(when the router 20 is in a waiting state S800 or normal state it receives messages that could be data messages from device 24, data item from host server or a registration message. The first step in receiving a registration message consists of a procedure for approval of connection (Col. 27, lines 4-26 and 42-45). When the message comes from the device 24 to the service 28, the device provides the router with the host service ID for locating and registering the correct host for the data message. The host service ID is stored in the HIH within a database of the router and could be an IP address; Col. 14, lines 15-40; Col. 15, lines 17-29 and Col. 18, lines 21-29)**, wherein establishing the link comprises: checking an ID and connection state of the repeater by loading a

stored repeater management table; and if the link has not been established with the repeater, establishing the link by transmitting an SMS message or ring signal to the data terminal equipment connected to the repeater, wherein said repeater management table comprises one or more of the following: a repeater ID field, a data terminal phone number field, a connection state field, a connection ID field, a field of IPs assigned to the data terminal equipment, and a download status field and wherein the establishing step includes: transmitting a connection request message as a ring signal through a modem to the repeater over the link; and connecting the link based on a response from the ring signal **(when the server 28 wishes to establish a link with the device 24 it sends a message including an identifier which could be an IP address that corresponds to the device; Col. 17, line 58-Col. 18, line 15)**.

Regarding Claims 10, 20, 21, 30 and 31, Lewis discloses further comprising: checking a version of control software embedded in the repeater; and updating the repeater with a new version of the control software, collecting only information required for repeater management and remote control, and reporting the information to the server at an information report time, wherein the information indicates at least one of whether the repeater is in operation and a version of control software in the repeater, further comprising: determining whether a version of control software in the repeater is outdated; and updating the repeater with new control software and wherein the updating step includes: transmitting the new control software from the server to the repeater over the first link. **The system inherently checks whether the device needs to be updated with a new version of software, if so,**

this information is collected and sent to the host system. The host system sends the updated software by means of sending data items through the mobile communication network via router 20 (Col. 3, lines 50-60).

Regarding Claim 27, Lewis discloses wherein the first link is established at a time of initial operation of the repeater. **The mobile device has the host service identifier stored during initialization at the reseller, distributor or manufacturer wherein the first link can be established (Col. 18, lines 29-34).**

Regarding Claim 29, Lewis discloses wherein the first link is established after a determination is made that the repeater has data to transmit to the server **(see rejections for claims 1, 8 and 9).**

Regarding Claim 35, Lewis discloses wherein the server initiates establishing the link **(see rejections for claims 1, 8 and 9).**

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6, 11, 12, 22, 26, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Sen et al. (Sen), U.S. Patent No. 6,208,620.

Regarding Claims 6, 11, 12, 22, 26, 32 and 33, Lewis discloses the system and method as described above.

Lewis fails to disclose wherein the data terminal unit is controlled

according to an IS-707 standard, further comprising: checking whether a disconnection request has been sent from the server, said checking performed by the repeater; and if no disconnection request has been sent, unless there is data transmission with the server during a standby time, automatically disconnecting at least one of the first link and second link and wherein said automatic disconnection comprises: after the disconnection, checking whether data exists that has not yet been transmitted to the server from the repeater, said checking being performed by the repeater; and if such data exists, sending a connection request again to the server.

In a similar field of endeavor, Sen discloses a TCP-aware agent sublayer (TAS) for robust TCP over wireless. Sen further discloses wherein the data terminal unit is controlled according to an IS-707 standard, further comprising: checking whether a disconnection request has been sent from the server, said checking performed by the repeater; and if no disconnection request has been sent, unless there is data transmission with the server during a standby time, automatically disconnecting at least one of the first link and second link and wherein said automatic disconnection comprises: after the disconnection, checking whether data exists that has not yet been transmitted to the server from the repeater, said checking being performed by the repeater; and if such data exists, sending a connection request again to the server. **The RLP is specified in IS-707 which is a protocol used for sending frames over a communications system. If the frames have not been correctly received after numerous timer resets, the trails are aborted inherently disconnecting a link. Because frames still exist and need to be transmitted, the system will then go**

through a process of caching & retransmitting of packets and monitoring & manipulating of delayed ACK (Col. 4, line 57-Col. 5, line 8 and Col. 6, lines 42-49).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to minimize the effects of faults when transmitting packet messages over an air link (Sen-Abstract).

5. Claims 18, 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Nakashima et al. (Nakashima), U.S. Patent No. 6,470,385.

Regarding Claims 18, 19 and 28, Lewis discloses the system and method as described above.

Lewis fails to disclose further comprising: collecting status information of the repeater connected to said data terminal equipment, and then reporting the status information to the server at an information report time, wherein the status information includes information indicative of a cause of an alarm occurring at the repeater and information relating to an internal location of the repeater when the alarm has occurred and wherein the first link is established after a disorder occurs in the repeater.

In a similar field of endeavor, Nakashima discloses a network monitoring system, monitored controller, and monitoring controller. Nakashima further discloses further comprising: collecting status information of the repeater connected to said data terminal equipment, and then reporting the status information to the server at an information report time, wherein the status information includes information indicative of a cause of an alarm occurring at the repeater and information relating to an internal

location of the repeater when the alarm has occurred and wherein the first link is established after a disorder occurs in the repeater. **The monitored controller 10a sends status messages which can be faults (disorders) to the monitoring stations 40a to 40n via the broadcast unit 20 this inherently can cause an alarm to occur at the monitored controller (Col. 4, lines 41-51)**.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to provide for a point-to-multipoint connection for collecting status messages that contribute to the improvement of efficiency in network monitoring activities (Col. 12, lines 17-30)

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aramoto, U.S. Patent No. 6,980,558 discloses a method of distributing program to a plurality of nodes within a network by using gateway.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantell Portis whose telephone number is 571-272-0886. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SLP

LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER